COMMITTEE HEARING

BEFORE THE

CALIFORNIA ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

In the Matter of:	)	
	)	
Preparation of the 2008	)	Docket No.
Integrated Energy Policy Report	)	08-IEP-1A
Update	)	
_____	)	

CALIFORNIA ENERGY COMMISSION

HEARING ROOM A

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

WEDNESDAY, OCTOBER 9, 2008

9:00 A.M.

Reported by:
Ramona Cota
Contract No. 150-07-001

COMMISSIONERS PRESENT

Jeffrey D. Byron, Presiding Member, Integrated Energy Policy Report Committee

Jackalyne Pfannenstiel, Associate Member, Integrated Energy Policy Report Committee and Associate Member, Renewables Committee

Karen Douglas, Presiding Member, Renewables Committee

ADVISORS PRESENT

Panama Bartholomy

Laurie Ten Hope

Tim Tutt

STAFF and CONTRACTORS PRESENT

Jim Bartridge

Sylvia Bender

Gerry Braun

Pam Doughman (via telephone)

Mike Gravely

Michael Jaske, PhD

Chris Kavalec

Suzanne Korosec

Rachel MacDonald

Donna Parrow

ALSO PRESENT

Carl Silsbee, Southern California Edison

Edwin Sayre, Advocates for Clean Reliable Energy

Robert F. Williams, Advocates for Clean Reliable Energy

Bob Burt, Insulation Contractors Association

Noah Long, National Resources Defense Council

Don Rodes, SolarAire

Fong Wan, Pacific Gas and Electric Company

Clinton Cole, CURRENT Group (via telephone)

Jane Turnbull, League of Women Voters (via telephone)

Sanford Miller

I N D E X

P R O C E E D I N G S

9:02 a.m.

PRESIDING MEMBER BYRON: Good morning, everyone. I'm sorry that we are just a few minutes late. I would like to welcome you all to a Committee Workshop on our Draft 2008 Integrated Energy Policy Report.

I am the Presiding Member of the IEPR Committee, Jeff Byron. And with me is my Associate Member of that Committee and our Chairman, Jackalyne Pfannenstiel, and to her right Commissioner Karen Douglas. My advisor all the way to the right, Laurie Ten Hope. And then all the way on the left here is Panama Bartholomy, Advisor to Commissioner Douglas and Tim Tutt, Advisor to Chairman Pfannenstiel.

I think what I will do is I will stop there, I will turn it over to Suzanne. I think we will come back, Suzanne, and allow my fellow Commissioners any comments but I think you may have some housekeeping issues you want to deal with. I know I am doing things a little bit out of order. Do you want to do the housekeeping things and then we'll come back?

MS. KOROSEC: It's good to shake things

up every now and again. Yes, I'll go ahead and do the quick housekeeping.

PRESIDING MEMBER BYRON: All right.

MS. KOROSEC: Just an introduction. I am Suzanne Korosec. I am leading the IEPR effort this cycle. For those of you who have not had the joy of attending an IEPR hearing before the restrooms are out the double doors and to your left. There is a snack room at the top of the stairs on the second floor under the white awning. And if there is an emergency and we need to evacuate the building please follow the staff as we go out the building to the park across the street and wait there for the all-clear signal.

Today's workshop is being webcast. And for those of you listening in on the webcast who may want to speak during today's public comment period the call-in number is 888-566-5914 and the passcode is IEPR.

And for parties in the room who wish to speak we do ask that you fill out blue cards. The blanks are on the table in the foyer. And if you can give those to Donna Parrow who is manning our phone there she can pass those on to the Committee. And we will take those in the order

that they are received.

So if you would like to move on to your comments, Commissioner.

PRESIDING MEMBER BYRON: Thank you. We hope that we will be able to conduct this proceeding this morning and finish by the lunch hour. But again, what we are interested in is public comment this morning on our Draft IEPR. This is an extremely important document that this Commission produces. I suppose probably not as important as the odd-year IEPR but there are a number of topics that we have taken up. Some that are required by legislative mandate and others that we think are timely and important to address.

Ms. Korosec will review those to some extent and a number of the recommendations, I believe, that we have made in this Draft IEPR. We have got lots of firepower sitting around the table. Key staff here at the Energy Commission that we hope will be able to answer questions and/or take the input that we receive today.

I am very interested to hear public comment as well as comment from the investor-owned utilities that are here. We hope that someone will be here from the Public Utilities Commission

and I haven't had a chance to find out if there's others. We, of course, are interested in hearing from all the agencies that may be affected by our recommendations. As you know we conduct this process openly and publicly and we are truly interested in feedback that we get.

Having said all that I would like to ask if my fellow Commissioners have any opening remarks.

ASSOCIATE MEMBER PFANNENSTIEL: Thank you, Commissioner Byron. Let me just observe that Suzanne began her housekeeping comments by saying if there's anybody here who hasn't attended an IEPR hearing before. I am firmly convinced there isn't a living Californian who hasn't participated in the IEPR.

But the value of what we do every year on a regular basis and the two year full cycle is, in fact, to raise some policy recommendations and get them out into the public and then get feedback. And the feedback is fundamental to the final reports that finally get adopted by the Energy Commission.

So I just want to thank people for being here. Looking forward to a very meaty and useful

day and I look forward to your comments.

COMMISSIONER DOUGLAS: Thank you, Commissioner Byron. I am also very pleased to be here and very much looking forward to hearing from the staff and the public on our Draft IEPR. Thank you.

PRESIDING MEMBER BYRON: Commissioner Douglas has been extremely busy so she doesn't have to be here, as the Chairman and I do, being on this committee. But we are glad to have you; it is great to have additional commissioners here as well. And I think that demonstrates the interest in hearing comments on these recommendations.

So having said all that, Ms. Korosec, why don't you go ahead. Take your time, there is no rush, and go ahead through the presentation and the recommendations that you have.

MS. KOROSEC: All right. I will start out today with a brief background on the IEPR and a summary of the process and the schedule for this document. And then we will move on to a summary of all the recommendations in the Draft Report and then we will take the public comment.

We do intend to finish up as early as we

can to accommodate the Commissioners' calendars today. But we want to make sure that we have enough time for public comment so we won't be taking comments separately on chapter, we will lump them all together. So if you do have comments on more than one topic you can just present all of those when you come up to present your comments.

And as Commissioner Byron mentioned, we do have our technical staff authors available here at the table to answer questions and we will take those questions at the beginning of the public comment period.

So Senate Bill 1389 requires the Energy Commission to prepare an Integrated Energy Policy Report every two years in odd numbered years, as well as a report in alternate years that updates the analyses or identifies other energy issues that may have arisen since publication of the IEPR.

The IEPR gives an overview of major energy trends and issues in California including energy supply, demand, pricing, reliability and efficiency. And in preparing the report the Energy Commission consults with a number of other

state agencies including the Public Utilities Commission, the Division of Ratepayer Advocates, the Air Resources Board, the Independent System Operator and the Departments of Water Resources, Transportation and Motor Vehicles.

PRESIDING MEMBER BYRON: Ms. Korosec, if you would, just cozy right up to that microphone and be a little louder for us.

MS. KOROSEC: Okay. Sorry about that.

The IEPR is really meant to be the foundation for California's energy policies and decisions and so the statute does direct other agencies to conduct their energy-related activities using the analyses and the policies that are contained in the IEPR.

As Commissioner Byron mentioned this is a public process. It is developed with workshops and hearings on specific topics where stakeholders and the public can present their comments and concerns. These then become part of the record and are used by the Committee in making their final policy recommendations.

We have conducted 12 staff and Committee workshops between March and October of this year to prepare this document. These were on the

topics that were identified by the Committee in its Scoping Order that was issued May 15, which are listed here.

First was the physical, operational and market changes needed to support 33 percent renewables in California.

Second is how the state's energy efficiency goals and programs interact with the Energy Commission's demand forecast.

Third is the status of efforts to address recommendations in the 2007 IEPR on electricity procurement, which included the need to standardize assumptions in the long-term procurement planning, extending the period of analysis and adequately incorporating risk in the evaluation of resources.

Fourth is an evaluation of the vulnerability of the state's nuclear plants to disruption due to a seismic event or plant aging, which is required by Assembly Bill 1632.

Fifth is an evaluation of the PUC's Self-Generation Incentive Program to determine the costs and benefits of providing ratepayer subsidies for renewable and fossil fuel, distributed, generation. This was required by

Assembly Bill 2778.

And finally a summary of the joint Energy Commission and PUC final opinion on greenhouse gas regulatory strategies. On this last item, because of the timing of the release of that opinion, we did not include a summary of that in this draft. At this point the joint decision is scheduled to be adopted by both agencies on October 16.

And we also included in this document a report card on past IEPR recommendations. I believe there are 44 recommendations that we went through and discussed the status and progress on those.

The schedule. We released this document on September 25. Written comments are due on October 16. We are going to turn that around fairly rapidly and try to release a final draft on November 3, for adoption by the full commission at a Business Meeting on November 19.

So with that I'll move on to the recommendations, starting with Chapter 1 on renewables. This chapter identifies some of the major barriers to reaching a 33 percent renewable target in California and discusses some of the

potential strategies to help overcome those barriers.

Some of these barriers include the need for transmission additions or upgrades to access renewable resource areas; challenges associated with integrating renewables into the system, particularly intermittent technologies and variable technologies; the potential for renewable contract delays and cancellations and the impact that may have on reaching our goals; the cost and rate impacts of adding renewables to the system; and finally, potential difficulties in permitting renewable generating facilities that are in environmentally sensitive areas.

To help overcome some of these barriers the IEPR Committee recommends to do further analysis in the 2009 IEPR of the issues related to transitioning to a higher renewables future, including the effects of key issues like once-through cooling, aging power plant retirements and greenhouse gas reductions.

To address transmission barriers we are recommending that we work with the publicly-owned utilities and investor-owned utilities to try to identify ways to remove barriers to joint projects

that could provide benefits for renewables.

This would include working collaboratively with entities through the RETI process, the Renewable Energy Transmission Initiative, to provide information on potential projects and corridors that might be necessary in the future. And also identify opportunities for joint project collaboration.

Also using the 2009 IEPR and the 2009 Strategic Transmission Investment Plan forums to identify and evaluate regulatory or policy changes that might reduce some of the obstacles to joint project development. And finally, ensure that land use and environmental issues are considered in the RETI process.

We are also recommending that we restore funding to the Energy Commission's local assistance program to help local governments with developing general plan energy elements that recognize the importance of the state's goals for renewable development and greenhouse gas reductions. Also this can help better inform the public and build public support for achieving these goals.

For integrating technologies into the

system we recommend continuing to implement recommendations from the integration work that was done by the Consortium for Electric Reliability Technology Solutions such as improved and long-term and integrated transmission planning. Some of these recommendations are outlined here.

Also to require load-serving entities' procurement plans to show how those resource mixes will address local reliability requirements to help maintain system reliability.

We need to focus our R&D efforts on energy storage technologies, on transmission system improvements and technologies, distribution level and building integrated renewables, and on renewable heating and cooling technologies.

Also we need to increase the amount of R&D funding that is devoted to transmission activities. And we are recommending that we increase annual funding to $60 million above what is already being allocated. And also that the publicly-owned utilities be brought in to also increase their transmission-related R&D activities.

To address some of the issues with contracting we are recommending that the PUC

should evaluate RPS proposals without direct participation of the IOUs. Include cost criteria, likely project success, locational benefits and land use and environmental consideration in that evaluation, assisted by non-market participants and the Energy Commission.

And also to give policy makers more information on where renewable contracts are going and where costs are going. We would like the IOUs to provide aggregate information on those prices, on project locations and on the schedules.

We also are suggesting that the PUC should make public the amount of above-market funds that are being allocated to RPS contracts. This was something the Energy Commission proposed to do when the above-market funds resided here under our renewable energy program. And we think that that would provide value to show how much of those above-market funds are being committed to how many projects.

And finally that the two agencies should develop a pilot program for feed-in tariffs for renewable projects larger than 20 megawatts. We do have a separate parallel proceeding going on on feed-in tariffs so this recommendation may change

in response to comments and things that are happening in that, in that venue.

Looking at price impacts. We need to better understand the effects of increased renewables on natural gas demand and prices as well as the impacts of regional changes in natural gas supply and demand on California's markets.

We also need to be continuing our work on our Cost of Generation Model to really refine the inputs and to update the changing technology costs over time so that we have more accurate information on which to base our cost analyses.

And that we also intend to be working very closely with the PUC on their 33 percent RPS analysis to estimate potential price impacts of a 33 percent target.

For the environmental issues: We need to continue working with the RETI to identify the competitive renewable energy resource zones where renewable energy development is expected to be least-damaging to the environment.

We should continue participation in the Solar Programmatic Environmental Impact Statement with DOE and BLM, and also continue to work with BLM on environmental impacts of permitting solar

thermal facilities in California.

And we will also be assisting the PUC to include land use and environmental considerations when they are selecting their RPS contracts.

All right, I'll move on to Chapter 2, which is on energy efficiency and the demand forecast. This chapter discusses the challenges with measuring and attributing electricity savings resulting from energy efficiency programs and other market forces within the Energy Commission's demand forecast.

It talks about methods currently used to incorporate energy efficiency programs into the forecast and identifies the approach that the Energy Commission staff will be using to clarify the efficiency assumptions in the demand forecast during the 2009 IEPR cycle and beyond.

Finally, it reports on progress made by the utilities towards the efficiency requirements of Assembly Bill 2021.

Recommendations from this chapter include that the Energy Commission should analyze the relationship between end use impacts that are modeled in the demand forecast and impacts that are used in efficiency program planning to

identify and resolve potential overlap between the two.

The IOUs and POUs, regulatory agencies and other stakeholders are encouraged to participate in the working group that has been established by the Energy Commission to address technical issues and develop consistent efficiency analysis metrics across the utilities and the various agencies.

And we also recommend continuing independent efforts to evaluate alternative forecasting methods, focusing on matching methods to the various purposes to which the demand forecast is being applied.

The Committee is recommending that we continue to work with the publicly-owned utilities to understand how they set targets and estimate their remaining economic potential. And also continuing to assist them to achieve their efficiency goals by improving overall evaluation planning, developing program tracking systems, and improving the savings reporting requirements for the next AB 2021 cycle.

Chapter 3 is on procurement. The 2007 IEPR recommended that the Energy Commission and

the PUC work together to improve the analysis methods that the IOUs used in their long-term procurement plans.

The 2007 IEPR said that the IOU analyses should use common assumptions as much as possible, adequately reflect significant ratepayer risks, extend over a 20 to 30 year period of analysis, incorporate environmental impacts and risks, and discount future fuel costs at a social discount rate to properly reflect the risk that is associated with that fuel cost volatility.

Chapter 3 talks abut the progress that has been made in the PUC's long-term procurement plan proceeding on these issues. It discusses reliability and resource adequacy issues that are associated with moving away from the use of once-through cooling in power plants. And talks briefly about the relationship between electricity procurement and the Energy Commission's power plant siting process.

Recommendations in Chapter 3 include that the CEC staff should continue to collaborate with the PUC in the long-term procurement plan proceeding to develop the 2010 plans. That we should assess in the 2009 IEPR longer-run, say 20

year, uncertainties related to electricity demand and natural gas prices and supply.

In the 2009 IEPR we may need to look at issues associated with the development of gas-fired plants for near-term reliability and the need to reduce utility carbon footprints over the long term. A lot will depend on the results of the long-term procurement plan proceedings so that maybe additional issues identified through that proceeding that we will need to look at in the IEPR.

Based on our analysis of the social discount rate issue we are currently recommending that those not be used in the procurement planning. But we think that it would be valuable for the PUC to reevaluate this when they are refining their bid evaluation criteria in the long-term procurement plan proceeding.

We are going to need additional analysis on the implications of replacing once-through cooling capacity. We are going to need to to use the results of the CAISO study on aging plants. This is due to be completed in early 2009 and that may raise additional topics that we will need to look at in the '09 IEPR.

And we will need to work with the PUC to help develop criteria to incorporate project planning and permitting progress in the bid evaluations. And we would like to see the siting-related criteria apply to all projects, not just those that are under the CEC's jurisdiction.

Chapter 4 is the nuclear vulnerability assessment. This is a summary of a consultant report that was prepared in response to the requirements of Assembly Bill 1632. Because of the timing of that analysis the summary included in this draft reflects findings but no recommendations.

The Committee Draft AB 1632 Report, which is based on the consultant report and does include recommendations, is scheduled to be released tomorrow in preparation for an October 20 Committee Workshop for the Electricity and Natural Gas Committee and the IEPR.

This report, although part of the IEPR, is on a separate and parallel track so we encourage parties to comment on the recommendations in that report at the October 20 workshop.

And the final findings and

recommendations from that report will be included in the adopted IEPR Update.

For Chapter 5, this summarizes preliminary findings from the Energy Commission consultant's evaluation of the PUC's Self-Generation Incentive Program, which was required by Assembly Bill 2778.

Like the nuclear report this is a work in progress and staff expect the final consultant report to be available later in October. The final results of that analysis will be included in the final 2008 IEPR Update along with the final recommendations.

However, we do have some preliminary findings and recommendations. We recommend that eligibility for the Self-Generation Incentive Program be based on system performance rather than fuel type. That the PUC should consider re-instituting formerly eligible engine and turbine technologies that use natural gas, digester gas or biodiesel. And that the PUC should consider providing incentives for energy storage technologies that can provide capacity benefits.

Also preliminarily recommend that the PUC should require the IOUs to meet some portion

of their distribution system upgrades with distributed generation or combined heat and power in areas where there are clear, locational benefits to the distribution system.

Also that the Energy Commission and the PUC should work with the IOUs to identify areas where there are these locational benefits. And that we need to define any additional studies to determine that.

We also reiterate the value of distributed generation, particularly combined heat and power, that we have made many recommendations in past IEPRs on this issue.

Some of those recommendations included that the PUC should develop tariff structures that will make DG and CHP projects cost and revenue neutral; eliminating non-bypassable charges for DG and CHP, regardless of interconnection voltage and standby reservation charges; and developing a way to estimate the value of Self-Generation Incentive Program-funded projects as well as DG costs and benefits.

Finally, we believe that the incentive structure in the Self-Generation Incentive Program should help meet specific targets for

environmental, transmission, distribution and economic benefits of DG technologies.

Finally, Chapter 6 discussed progress on prior IEPR recommendations. As I said, there are 44 recommendations in the report. I am not going to go through these at all. But I do want to ask parties to identify in your comments, either here or in the written comments, any misstatements or omissions or any progress that has been made since the draft came out that we may not be aware of.

So with that I think we are ready to take questions or move directly into the public comment period, depending on the -- Do we have questions from the audience on any of the material?

PRESIDING MEMBER BYRON: Good point. As far as I am concerned, Ms. Korosec, that was the most important presentation I have heard all year. A lot of material was covered in there. Before we start taking public comment, are there any questions anybody has specifically on this presentation? We will have a wide open comment period so everybody will get an opportunity to speak. But if there's any specific questions now let's take them. Commissioners?

ASSOCIATE MEMBER PFANNENSTIEL: No.

PRESIDING MEMBER BYRON: A lot of material there. It's like, where do we begin. All right. What I would like to do then, since we are -- Our agenda as you can tell is fairly brief. It is this presentation and comments.

Let's do this. Let me ask if there is anyone here that is time-constrained. And I turn first to Commissioner Douglas just in case we are not going to have you for the entire workshop period. Is there anything in particular you would like to say?

COMMISSIONER DOUGLAS: No, take it in any order that you think appropriate.

PRESIDING MEMBER BYRON: Okay. All right. I have a number of folks that I have received cards on. We will get to the folks on the phone but I think we always give deference to those that make the trouble to be here. I would like to ask if there is anyone in the audience that has a time constraint that would like to make comments that may need to leave soon?

All right. Having seen no hands there then I will just go down the list on the order in which I have received them, if that is okay. I

have the first card from Mr. Carl Silsbee from Southern California Edison.

MR. SILSBEE: Good morning, Commissioners, advisors. It is good to be here again. I have been here several times through the course of this IEPR process.

We do plan to provide written comments on the 16th. What I would like to do this morning is highlight three areas, procurement obligations, feed-in tariffs and the Self-Generation Incentive Program evaluation.

We are a bit perplexed by the recommendation for the CPUC to take complete control of the IOU procurement process.

PRESIDING MEMBER BYRON: I know. It is a startling thought, isn't it.

MR. SILSBEE: No, it is actually not. We currently have two tracks of procurement. For renewable power we file an annual RPS procurement plan with the Public Utilities Commission. Once it is approved we conduct a solicitation pursuant to the direction of the Commission. We select projects which we then take to the Commission for approval.

For all-source and new generation

procurement, which takes place pursuant to a CPUC-approved AB 57-compliant procurement plan. We have a biennial review by the PUC of that plan. We are required to have an independent evaluator work directly with our staff and report back to the Commission on the process for longer term procurement under the AB 57 plan.

We don't really have skin in the game here. We don't have an opportunity to make money on procurement. It is a service we provide to our customers. We very much appreciate the involvement of the PUC in providing us direction. If you go back to 15 years ago there were significant, reasonable review risks. And we have a very narrowly constrained area of discretion on the AB 57 compliance plan, which makes us very comfortable in terms of our procurement.

And given the existing extent of CPUC control, it isn't clear to me what more the CEC is recommending in terms of oversight of the process. There are issues with regard to the CEC staff's understanding of what we do in the procurement process. I'd be more than happy to make sure that we work with them and provide some of that insight and visibility of the process.

Secondly I would like to point out that with regard to feed-in tariffs we did proactively support development of the water and wastewater treatment feed-in tariff. We are not opposed to the underlying concept. However, we do suggest that the CEC be cautious in advocating further development of feed-in tariffs. Our view is that the primary impediments to development of new renewable technology are the transmission, the permitting and financing of projects, not so much the contractual form.

PRESIDING MEMBER BYRON: I'm sorry, would you please -- Maybe I didn't hear all of that but I am not quite sure I grasp that, Mr. Silsbee.

MR. SILSBEE: What I'm saying is --

PRESIDING MEMBER BYRON: Would you repeat that or clarify it.

MR. SILSBEE: Okay, let me try to provide a little more detail into what I was attempting to communicate. The primary impediment --

THE REPORTER: Mr. Silsbee, will you please speak into the microphone.

MR. SILSBEE: Okay. I was actually

trying to step back from the mic so I could talk a little louder. I always seem to have this problem so let me know if you are not hearing me.

THE REPORTER: Thank you.

MR. SILSBEE: I think the report recognizes the barriers that we in see the renewable development. Transmission is obviously a significant issue. Permitting can be an issue and financing can be an issue. And that's one of the reasons, of course, we are signing RPS contracts that go 10 to 20 years, to provide some of the financial certainty to project developers. We don't see the form of contract as being as significant with regard to the development of new renewables.

And of course when we talk about a feed-in tariff the issue we are taking here is instead of having an RPS-type contract with a solicitation it is either a fixed price that is subject to periodic adjustment by the Commission or it is some kind of a standard offer contract. And we just don't see pursuing the development of feed-in tariffs to have the same level of bang for the buck in terms of renewable development as dealing with some of the other issues, particularly

transmission.

PRESIDING MEMBER BYRON: Thank you, and I think I do understand what you are saying. In fact, my difficulty was the topic was feed-in tariff and then you started talking about transmission and procurement and standard offer. Were you here at our feed-in tariff workshop last week?

MR. SILSBEE: Unfortunately I was not. I did review the presentation that Marcie Bergdorf provided.

PRESIDING MEMBER BYRON: Your comments exemplify one of my primary concerns. And that is that the utilities only look at this through their own lens. In fact, it seems everybody looks at it through the utility procurement lens. What we are rally interested in is a way of getting to these renewables. Not necessarily the transmission level.

We are talking about, I believe we are going to correct our recommendation based upon that workshop to procurement. We are not going to suggest a pilot project. We are going to suggest that we look at feed-in tariffs for all renewables less than 20 megawatts.

So I don't believe that most of those will require transmission. I don't believe that most of those will require utilities to enter into contracts. What we are looking at is a way to infuse more renewables into the system that don't have to go through this complex and convoluted utility procurement process.

Now we are very concerned about the risk that that represents to the utilities and I hope really what we are talking about is to your customers. We can appreciate your concern but that is going to probably be the recommendation. Is there any other correction on that, Madame Chairman? We were noting that while Ms. Korosec was giving her presentation, that we have made some changes.

ASSOCIATE MEMBER PFANNENSTIEL: Real-time changes that are going on based on that discussion.

MR. SILSBEE: I very much appreciate that. One of the concerns, of course, was the recommendation for pursuing feed-in tariffs above 20 megawatts.

ASSOCIATE MEMBER PFANNENSTIEL: But I would also say that I think that the jury is still

out on the above 20 megawatts. Clearly transmission and other issues need to be addressed under any circumstances. You know, whether you have feed-in tariffs or not you still have constraints that are first in order of what we need to deal with.

But we are hearing -- And we didn't hear much at the workshop but we have heard otherwise, and in fact we heard in the '07 IEPR process, that dealing with the utilities and trying to secure individual contracts and then getting financing on those contracts has been an obstacle to the larger developers, the RPS large developer, renewable developers.

So, I mean, I don't think we have left that issue but we did hear that probably sooner than that we could get this group of one to 20 megawatts on-line faster with a fixed feed-in tariff, and that is the idea of a feed-in tariff, that would be cost-based, not MPR-based. And that would be must-take. The energy would be must-take. So our sense is if you do it there you get something sooner rather than later. There was just a correction on what we had in the original report.

MR. SILSBEE: If I could ask for clarification when you say cost-based as opposed to MPR-based.

ASSOCIATE MEMBER PFANNENSTIEL: Right. Technology-based rather than gas-fired based.

MR. SILSBEE: Okay. So the notion would be a fixed payment amount by technology rather than tying the payment to the MPR.

ASSOCIATE MEMBER PFANNENSTIEL: Yes.

MR. SILSBEE: Okay. I appreciate that. We will take, you know, the comments that you have made into consideration and we will have comments on the 16th.

PRESIDING MEMBER BYRON: If I could elaborate on one point. As you know we are working on the transmission issue and the Energy Commission is spearheading the RETI process. And I feel very strongly that we need to get transmission fixed and we can't put all our eggs in that basket in order to get renewables moving.

And that's why it is so important that we get the utilities and the system operators to begin to embrace the notion that there's a lot that can be done on the distribution system. There's a lot of capital in the private sector

that's willing to put money into renewable generation.

And we need to get out of the context of looking at this just from the utility perspective. We need to figure out how do we accomplish the state's goals. And I really look to the ISO and the utilities to embrace this rather than continue to resist it.

MR. SILSBEE: I am not sure I would characterize our position as resisting it. But certainly one concern that we have expressed all along the process is trying to balance the social objectives here with the cost to our customers.

PRESIDING MEMBER BYRON: Right. But as I have pointed out to others, executives in your company and others, we don't hear your concern about the price of natural gas fluctuating and going up to $15 a million BTU this last June or July. You just pass that cost through to customers.

And in essence I think that is the way to begin looking at feed-in tariffs. We are making a societal decision here and the state has been pretty clear on this. And I think we can anticipate knowing that Speaker Bass has assigned

to some assembly members to get an RPS bill done. We know that the Governor's Office policy is to move to 33 percent. It is the policy of this commission for a long time. This is a social decision that we are making.

And I am so glad that there is the Public Utilities Commission in San Francisco to protect customers from high costs. But this is one of those issues that I think we need to start saying, okay, we are going to pass this cost through just like we do natural gas but we don't like natural gas as much as we like renewables.

It is a philosophical difference here that we are looking for transitioning, I think, on the part of not just investor-owned but the publicly-owned utilities. Mr. Silsbee, I am so sorry to pick on you. You have other points you want to make.

MR. SILSBEE: Just one more. I would like to talk briefly about the SGIP. I did participate in the workshop on the SGIP and it was more of a question and answer session with the consultants. I appreciate the openness.

My observation though is that we aren't very far along in the process. There are some new

things that came out in the draft IEPR report that really haven't been discussed at the workshop. There's still work to be done to finalize the numbers, which aren't yet there. And I would just ask the Commission to consider the possibility of trying to go on a little slower track here and bringing this up at the front end of the 2009 IEPR rather than trying to rush things into the 2008 IEPR Update.

There appear to be some fairly interesting and intriguing new ideas presented such as the attempt to link up feeder or distribution system impacts on a project by project basis. And we are doing some work in that area with regard to distributed generation. Excuse me, with regard to demand response, not distributed generation. Where we are looking at impacted circuits and looking at where the demand response participants are with regard to those circuits.

This is a different take on it. I am very interested in what the consultant has done. But I really would like the opportunity to have some review process before this just kind of hits the street. So I would ask you to consider

delaying the --

PRESIDING MEMBER BYRON: I appreciate that. The reason I laughed a little bit to myself is because I feel the schedule is very compressed as well. And I agree with you, it is moving very quickly. But there is a legislative mandate on that particular review and that report must be part of this IEPR.

I am also holding the staff responsible to maintaining our schedule as well. We are committed to get this IEPR out by the end of the year so that we can get to work on the '09 IEPR and the 40 or so workshops that we need to conduct in order to do that.

So I appreciate your concern there. All I can ask is that you please provide us thorough written comments so that we can incorporate necessary changes based upon those comments.

MR. SILSBEE: Is the obligation to put the SGIP findings -- excuse me. Is the obligation to put the SGIP findings in the IEPR or just complete the Commission's evaluation by the end of the year?

PRESIDING MEMBER BYRON: Well.

MS. KOROSEC: It is to include it in the

IEPR. It says it will be included in the 2008 IEPR.

MR. SILSBEE: Okay. So you may not have the flexibility.

MS. KOROSEC: Excuse me. Rachel may have a clarification.

PRESIDING MEMBER BYRON: Go ahead, Ms. MacDonald.

MS. MacDONALD: Hi, Rachel MacDonald. I would like to clarify that the actual legislative obligation was to conduct the evaluation before November 1 and it is inclusion in the IEPR.

I am running -- I am the contract manager on this and yes, it is a very compressed schedule. We are running a parallel kind of process to this because we have got results and we have the draft coming out as was stated, hopefully later next week.

I am going to be publicly posting that as a notice and then allow a comment period and include that. So it is very compressed but there is time for interaction still. So I would like to volunteer that.

MR. SILSBEE: I appreciate that.

PRESIDING MEMBER BYRON: I had the

pleasure of going to Southern California and meeting with some of the executives in your company and I have done this with the other investor-owned utilities as well. Soliciting their input and the assignment of manpower to this.

I know it is a tremendous commitment for the public and for companies like yours to participate in this process but we think it is so important. I apologize for the compressed schedule but I feel compelled to meet these deadlines. As you know, we get taken to task as well when we don't get the work done that we have been assigned to do.

MR. SILSBEE: I appreciate if you have deadlines to get back to the Legislature. It behooves you to meet those deadlines. And we'll work as best we can within the schedule.

That concludes my comments. I appreciate your listening to my suggestions.

PRESIDING MEMBER BYRON: If you will wait a moment we may have some questions for you.

ASSOCIATE MEMBER PFANNENSTIEL: Mr. Silsbee, in talking about procurement you indicated that Edison has no skin in that game.

Yet in fact your customers do, clearly.

And there seems like -- There doesn't seem to be, I guess, a special incentive to the utilities to minimize the gas costs that are passed through. And yet as Commissioner Byron just pointed out, there really is, you know, a concern about passing through renewables costs. I just think that's somewhat disingenuous. I think that we need to be careful about where the incentives are. And part of the Energy Commission's recommendations on procurement is to try to build some common ground for incentives.

But the other point on being indifferent to procurement. I guess I have heard from the utilities in the past, and I didn't see anything on it this time, some preference or some reluctance to take on too much in the way of purchase power because of the debt equivalency issue and there's a difficulty being too much obligated on purchased power. Is that an issue? Is that something that you have -- do you have a certain amount of procured power compared to utility-owned power that is your preference?

MR. SILSBEE: Certainly debt equivalence, credit and collateral are all issues.

We don't have a particular target with regard to some percentage of UOG. But, you know, clearly additional rate-base investment helps enable more support for IPP because of the leaning of the IPP projects on our own financials.

Let me take on a couple of responses to points you have made.

ASSOCIATE MEMBER PFANNENSTIEL: Please.

MR. SILSBEE: The CPUC did look into the issue of procurement incentives a number of years ago. Our very strong concern with procurement incentives is that they create a misalignment between the interests of our customers and our financial interests as a company. I think our most important consideration here is we want to be able to freely act on behalf of our customers without having to worry about any dissonance in our decision-making. For that reason we can't --

PRESIDING MEMBER BYRON: So not to worry about what? I'm sorry, you trailed off.

MR. SILSBEE: Any dissonance between the goals of doing what's best for our customers and what might be the financial ramifications to our shareholders. We like to see a nice, tight alignment. And we believe that not having

procurement incentives is the better way to go on that.

When I said no skin in the game I was really talking about the narrow financial.

ASSOCIATE MEMBER PFANNENSTIEL: You're talking about the shareholder interest. The shareholders have no skin in the game.

MR. SILSBEE: Yes. I think very clearly electricity is an essential commodity for the state. I think very clearly the economic well-being of customers in our service area is intrinsically tied to the financial health of our company and an ability to support the infrastructure of the state and vice versa. And so we do care a lot about our customers. I don't want to suggest by saying there is no skin in the game that we don't.

ASSOCIATE MEMBER PFANNENSTIEL: I understand that and I am not going to argue the question of procurement incentives. But I do think it raises fundamentally the question that we have put on the table. Is the current procurement process really balanced for customers in the way that takes into account the many issues that we have raised. I think that is still an open

question. I am not the least bit convinced the current process does everything that we as public policy people would want to have done, that's all.

PRESIDING MEMBER BYRON: Mr. Tutt.

ADVISOR TUTT: Carl, with regard to feed-in tariffs. It is my understanding that in the most recent RPS procurement plan Edison has recommended expanding feed-in tariffs to all renewables under 20 megawatts. Is that true and can you explain a little bit about your thoughts there.

MR. SILSBEE: I believe it is true but unfortunately I don't have the details, which is why I didn't raise this point earlier in response to Commissioner Byron's questions on the topic. I can provide some additional details to you if you'd like but I'll have to go back to the people in our renewable procurement area.

ADVISOR TUTT: Well, or perhaps in your written comments then.

PRESIDING MEMBER BYRON: If that is the case you can certainly preempt any one of our recommendations at the PUC with your proposal, I think that's a great idea.

MR. SILSBEE: Good.

PRESIDING MEMBER BYRON: Mr. Silsbee, thank you very much for your comments.

MR. SILSBEE: Thank you.

PRESIDING MEMBER BYRON: The next card I have is from Mr. Edwin Sawyer or Sayre, ACRE.

MR. SAYRE: Thank you. I am chairman of ACRE, Advocates for Clean Responsible Energy. We are a group of about 30 engineers, mostly retired. A few are still working. And scientists who have over 30 years of experience in energy systems.

The California Energy Commission recognizes that renewables, primarily solar and wind, are clean sources of energy. You cannot ignore the physical fact that since they both have a 20 percent capacity factor it will be impossible to meet the future goals of California without substantial amounts of safe, dependable and economical energy storage.

Pumped water storage is the only safe, dependable and economical storage source that has been proven. If California is to meet its goal for wind and solar power by 2020 it will require 8,310 megawatts of pumped storage. This will mean four storage sites the size of Hoover Dam with two large reservoirs each. If we need to meet the

goal of 2030 it will require 19,300 megawatts of storage. This would require ten sites the size of Hoover Dam. Where can we put these sites in California?

Since solar and wind renewables are a clean source of energy the California Energy Commission must provide support for development of efficient, safe and reliable energy storage because meeting our goals for the use of renewables depends completely on it.

Even though the majority of California citizens are in favor of nuclear power, because of pressure from anti-nuclear lobbyists the Legislature has been against nuclear power. This government anti-nuclear policy has had an adverse effect on the assessment of California's operating nuclear plants.

This is included in the 2008 Integrated Energy Policy Report. It does not include that over the last 50 years the nuclear power plants have demonstrated being the safest, most economical and most reliable and environmentally clean power source in the world.

The report stated that Diablo Canyon and San Onofre Nuclear Generating Station could have a

major disruption because of an earthquake or plant aging. While this is a possibility for any energy source in California, based on the world experience the probability of this happening to Diablo Canyon and San Onofre is extremely low.

Around the world the cause of shutdown of a nuclear plant is not a problem of the basic reactor system. It is usually caused by a problem with the electrical system, such as a transformer fire, turbine problems, heat exchangers, steam generator cooling systems and so forth. The earthquakes in Japan have proven that basic PWR and BWR reactor system design can survive a 7-level earthquake with no significant harm.

The majority of nuclear plants in the US have been upgraded and extending their life for another 20 years. California should take advantage of this experience and do the same thing. There is a huge economic advantage for the utility users and the utilities.

Fear of stored nuclear fuel is cause for the lack of knowledge of what it is. It is not nearly as dangerous as some people believe. It is a solid, hard-rock material with most isotopes internal, the uranium oxide rock encased in

zirconium tubes.

When the used fuel comes out of the reactor, because of the high decay reading, it must have significant cooling with water. Within a few months the cooling requirements have dropped significantly. In the event cooling water in a fuel pool leaks out the fuel can be sufficiently cooled with a fire hose.

There is only a very small amount of isotopes in the fuel that can be released and taken up by the human body. And most of them do no harm except for Iodine 129 which goes to the thyroid gland. This can be taken care of if the instance happens.

Used nuclear fuel is not a good target for terrorists. Nuclear fission used in a modern nuclear plant where the used fuel is reprocessed and recycled and the fission product separated and refined for commercial use and the non-usable isotopes transmuted for short storage and then returned to the environment, is the most safe, economical and environmentally friendly source of energy that can be used by California for the future. The California Energy Commission must give it full consideration for the future economy

of California. Thank you.

PRESIDING MEMBER BYRON: Thank you, thank you for your comments. If you would like to help provide some responses to a few of those issues that you have raised, if I may.

MR. SAYRE: All right.

PRESIDING MEMBER BYRON: First of all I am sure, Mr. Sayre, that you are familiar with the law that has been on the books for a number of years here in California.

MR. SAYRE: Yes.

PRESIDING MEMBER BYRON: And also you may be aware that there was some effort. Assembly Member DeVore last year attempted to introduce some legislation to revise that law. So you are aware of that also.

MR. SAYRE: Yes.

PRESIDING MEMBER BYRON: Apparently it did not make it out of committee. I was at a meeting with Assembly Member DeVore a couple of weeks ago. The first that I had met him and heard him speak and I was quite impressed. He has got some very good arguments that he has put forward as well to his colleagues.

But I believe, based upon my tenure here

at the Commission, that change in law will be necessary before this Commission will be able to make any kind of finding or take any kind of action.

MR. SAYRE: The Warren-Alquist law is holding you up from doing anything.

PRESIDING MEMBER BYRON: No, it is not the Warren-Alquist law. I am not familiar and I am not sure that there is anyone here that I can turn to and ask specifically but it is not the Warren-Alquist law. There is another law that has been on the books, I believe, for over 30 years, however. So I know that there is some movement in the Legislature although, like I said, I don't think it is has found its way out of committee.

The other, as you may well be aware, that there is a group that seems to be getting more sophisticated that we have met with more than a couple of times, myself and other Commissioners, from Fresno that is intent upon building a nuclear power plant.

All I can tell you is that we have met with them and we have tried to answer their questions from a legal point of view in terms of the law that is currently on the books. And I

think it is fair to say that they will persist. I don't think they are going to give up any time soon. So there are some, there are some things that are taking place.

But this Commission is constrained in terms of what we can do. The reason that is being addressed in this IEPR is Assembly Member Blakeslee did pass a bill, I believe it is AB 1632, that requires us to look at the impact on reliability and safety for the unexpected shutdown of large power plants, which happened to be the two sets of large nuclear plants. So that's the nature of the report that is involved in this particular IEPR cycle.

And I think it is a really good question. I think the Assembly Member is very thoughtful in what he is attempting to do there. There's a number of reasons that those plants' units could shut down. You made reference, I believe, to the Kashiwazaki-Kariwa power plant that experienced an earthquake last year in Japan. The largest single-site nuclear generator in the world. I believe it is over 8200 megawatts of power generation.

And the result of that earthquake, no

one was injured, no one was killed, no release of radiation. But that unit, all five units have not been operating for the last 16 months as a result -- I'm sorry, 15 or 14 months as a result of that earthquake. So that was --

MR. SAYRE: Yes, but none of them were damaged. The nuclear system was not damaged one bit in any one of those plants.

PRESIDING MEMBER BYRON: Correct, correct. Well we don't know that for sure. We know there's a great deal of inspections that have been going on.

MR. SAYRE: Well most of us who were in the nuclear area know that that's the fact so far. We have all this prevention.

PRESIDING MEMBER BYRON: Right. So I think it is a legitimate concern that the Assembly Member has raised in passing his legislation and that is really what we are looking at. Is the impact that that would have if for whatever reason those units were shut down. If there was a licensing incident that took place in Wisconsin, for instance. We know that could also potentially affect those units as well. So that is the extent of what we are looking at, this particular issue

in this IEPR.

MR. SAYRE: I think that's right. I know you are looking at all these things. I think though that the attitude of the CEC has been negative and there has not been any push to look further and look more in the future of using nuclear power in California and taking advantage of the fact that most of the states in the United States now are in favor and are pushing nuclear power for the future.

PRESIDING MEMBER BYRON: That is a fair accusation. I can tell you, however, this Commission last summer held two days of workshops on this subject. And we had the Yucca Mountain folks here and the Department of Energy folks and we quizzed them extensively.

I believe that this is not just an issue that needs to be discussed about the future of nuclear power. We have four operating reactors in this state. And the federal government has a responsibility to take spent fuel and they are not fulfilling that responsibility. So we are concerned about it in that regard as well.

MR. SAYRE: Well the other thing I pointed out in my comments is that California

should be also pushing reprocessing because that is going to be very critical to our future. And also we need fast reactors to really make it economical.

The used fuel in California right now is worth over $3 billion. The economic value of it. Every ton of used fuel is worth over $20 million. The fission products used fuels, most people think they are very dangerous. Ninety-five percent of them have economic value. Only a very small percentage is not usable. That has to be taken care of as waste.

PRESIDING MEMBER BYRON: Well if you have a buyer for that fuel I'm sure that Southern California Edison and PG&E would love to get rid of it.

MR. SAYRE: I guarantee you there will be a buyer. If they reprocess their fuel and separate those out and purify them for commercial use there's a buyer for every one of them.

PRESIDING MEMBER BYRON: Sir, any other questions? Sir, thank you for your comments, thank you for coming.

I have another -- My next card is also from, I'm sorry, Advanced Clean and Responsible

Energy, Mr. Ray Williams.

MR. WILLIAMS: Yes, Robert Williams.

PRESIDING MEMBER BYRON: I'm sorry. I should know that.

MR. WILLIAMS: I am very pleased to be here. I have a one-page handout for members of the Commission up here.

PRESIDING MEMBER BYRON: Actually if you will save your comments until you are back at the microphone. We will take your handout.

MR. WILLIAMS: Okay. And here's a set of handouts to pass around at the head table here.

I am Robert Williams. I have a degree in chemical engineering from Stanford, an MBA from Santa Clara, three years of training in the GE Advanced Engineering Training Program. I worked for 30 years in the electric power industry. Ten years at General Electric where I designed reactors, 20 years at Electric Power Research, where I was responsible for fuel cycle programs, including the waste disposal.

I guess now that I am retired I have the luxury of preaching to committees and things. And I think the first preachment I would make is not on my paper here. But it is very important and

very difficult to tell truth to power. You have that luxury because you are a Commission with access to the Governor and the Legislature. So here are some of the things that I would alert you to.

I think your forecast may be off. I haven't followed all of the machinations of the IEPR but I don't believe you are making an adequate allowance for the electric power requirements for electric power that is plug-in and hybrid electric vehicles.

My recollection, I don't have all the data I used to have access to, but the transportation sector alone has about as many quads of energy burned as the electric power industry. So if you just electrified transportation you would double the requirements for electric power. So I think you are not making enough allowance for a large growth scenario in the electric power industry.

Secondly I would say some type of common-sense confirmation of energy cost is needed. Let me relate to you a personal experience. I am a retiree. I just have sold my house and moved to a retirement community in the

midst of the biggest financial crisis we have seen in the United States.

I am very sensitive to the idea of subprime mortgages. Subprime mortgages were a societal mandate. Everybody thought they were a wonderful idea but a few people didn't take into account that extra regulation might be required. And so truth didn't get told to power until it was very, very late.

Now I think we are fooling around with some subprime technologies. If we don't get everything just right. My colleague, Ed Sayre, has pointed out the vulnerability of these advanced technologies to the need for reliable storage.

There is a second element in that as well which is the need to assign the responsibility to provide reserve power margin. If you don't have adequate power on the grid, you don't have enough spinning reserve, you can lose the whole grid. You don't just lose a fraction of it, the whole thing can go unstable. And unless there is a provision for a lot of load shedding and blackouts the whole thing can black out. I haven't seen anything in this report that deals

adequately with a requirement to provide reserve margin.

The other thing I am skeptical about is the economics. A great deal of my career was on economics. And when you start putting together things that add avoided costs and credits for this, that and the other thing you need a touch-point of sanity. And the touch-point of sanity would be to start making annual comparisons of the cost of power provided in different grids in different parts of the United States and even in different parts of the world.

I would be far more reassured if I -- I have time of day metering in California. And I am always a little bit taken aback when the cost of my peak time of day is around 32 cents per kilowatt hour for my electricity. That's way up there in terms of affordability. If we made gasoline -- If we powered automobiles with that price of electricity we would be talking about $10 or $15 per gallon gasoline.

We are very vulnerable to taking small prototypes which get subsidized with basically built-in taxes in the electric energy supply system and then discovering that they are way too

expensive when they start to be a significant part of the grid.

So I am quite concerned that many of these technologies are a subprime technology that is going to lead us down the primrose path, despite the fact that it is a very valid societal goal imposed by the Legislature. We would all love to keep the world safe from greenhouse gases. But we better be realistic about how we do it or we will have a technology crisis on our hands similar to this mortgage crisis.

So having spent my career in nuclear energy you can see the direction I'm headed. I think if the transportation sector is taken into account particularly, more consideration of nuclear power is required. I heard your comments to Mr. Sayre. We have both been up here testifying on the need to amend the Warren-Alquist Act. And I realize that that hasn't been done and so you are under some constraints.

But I believe your main constraint is to tell truth to power. If there are some vulnerabilities in what you are being asked to pursue I don't think you should your head down and doggedly pursue them. You should say, gentlemen,

we have done this IEPR report. We have got all these nomenclatures lined up. But we are talking about producing gasoline at $10 a gallon effectively. We are afraid that will have some severe energy impacts. We are talking about high-priced systems with very great vulnerability to outages and we are not sure who is going to be responsible for the spinning reserve.

You can see my more carefully chosen remarks in my written handout. Thank you.

PRESIDING MEMBER BYRON: Thank you. Thank you for coming and providing these to the Committee.

Mr. Bob Burt. And you abbreviated all three words in your association. Would you please expand them.

MR. BURT: I represent the Insulation Contractors Association. And I rise to point out that there is a hole in California's energy efficiency process. At present virtually all of the measures which we work on in energy efficiency are either devised by the utilities which manage the programs or with some input from the regulatory staff.

I believe that it defies common sense to

assume that such a small group of people, even if they all have active imaginations, is enough to give us a thorough panoply of good measures.

And to that end I suggest that there be some set of regular, a regular process. I would assume noticed hearings, which possibly by the PUC, which would consider proposed new energy efficiency measures, reflect on those proposals, and then consider to what extent they should become part of our regular active proposal actions.

And with that I complete my prepared remarks. I can't resist while I am standing here noting that there's not much recognition, anywhere apparently, of the tremendous scale of California's energy business. And blithe comments about replacing 30-odd percent of it or some other number within some short time have to be recognized as just that.

I would go back further and say I endured for some years of my life being an active lobbyist and that led me to two conclusions about the subject of law. Number one, it doesn't very often make sense. And number two, it seems to be fairly easy to change if, in fact, you have a

reasonable number of campaign contributions.

That doesn't necessarily help this Commission. But at the same time there is in the Legislature some considerable respect for those agencies which are stuck with the job of dealing with energy. So I will kind of support one of the earlier comments about telling truth to power.

With that I withdraw and ask if there are any questions about my initial proposal?

PRESIDING MEMBER BYRON: There's a little cynicism in your comments about legislation. Can you offer us any hopeful words, Mr. Burt? I mean, let me ask you a specific question with regard to your lobbying skills. Have you been able to convince Mrs. Burt on using compact fluorescent lights yet?

(Laughter)

MR. BURT: Well, there is another aphorism which doesn't really affect here. And that is that any man who claims he is the boss at home will lie about other things.

(Laughter)

MR. BURT: So I have not had much skill at convincing Mrs. Burt of things that she really wished to disagree. But I don't believe that that

is apropos to the business of lobbying. Lobbying is entirely a matter of, one, speaking persuasively when you get the chance. But two, having an audience willing to give consideration to what you say.

And the second point is the reason that I say that I observe that the Legislature does seem to have a fair amount of respect for the agencies that it sticks with the job of conducting our energy process. That observation of mine is not based on a lot of happy results, it is simply based on a few times when it seemed to work. I can't go much further than that, sir.

PRESIDING MEMBER BYRON: I would like to only add one thing, and that is, of course, the industry that you represent is extremely key to what we are recommending first and that is, energy efficiency. Beyond trying to address all of our concerns by building additional generation.

This Commission and the Public Utilities Commission have certainly pushed, we believe, energy efficiency to the limits. You may be aware in our Joint Proposed Decision on trying to reduce greenhouse gases we are going to press for 100 percent economically efficient, economically

achievable energy efficiency.

MR. BURT: The reason I make this --

PRESIDING MEMBER BYRON: And insulation is a big part of that.

MR. BURT: The reason I made this recommendation is that I have taken part in various workshops in the past and made suggestions on new and different energy efficiency measures. I have never seen subsequently any sign that those suggestions were even given serious consideration. So it seems to me that if there is a formal process it is much more likely that serious consideration would occur.

PRESIDING MEMBER BYRON: Well, I don't know how to respond to that except to say thank you. Is there anyone on our panel that would like to speak to what Mr. Burt just said? Not required. Mr. Burt, thank you very much for your comments. I'm sorry, Mike, did you want to say something?

MR. GRAVELY: Yes. This is Mike Gravely from the Commission's energy research and development area. And I do think there are some programs in place. You mentioned specifically efficiency and I do think -- In research and

development we do and the efforts we try and get to.

And we do have public hearings and a public process and also other areas to get different technologies through the validation phase, then to the research and development programs and then into the Commission -- the utility incentive programs. And so if you have suggestions I certainly would offer my assistance.

PRESIDING MEMBER BYRON: Please speak into the microphone, Mr. Gravely.

MR. GRAVELY: Okay. I would certainly say that we have a very aggressive research and development program to bring new energy efficiency technologies to the utilities and would welcome your recommendations or comments to our staff. I'll give you my card and feel free to contact me.

MR. BURT: I am well aware of that process. The particular measure I am most interested in does not require the slightest amount of research and development, it simply requires some effort to implement. Thank you.

PRESIDING MEMBER BYRON: Thank you, Mr. Burt. The next card I have is Noah Long from NRDC.

MR. LONG: Thank you very much, Commissioner Byron and all the rest of the Commissioners here who have worked so hard on this report. And also thank you to the staff, I know it has been a long time coming. I just would like to say a couple of things as introductory here.

First of all, I will be reading comments on a number of chapters. The comments were prepared by staff across NRDC so if you have questions on those comments I might be able to answer them but I might just have to take them back to other staff members and we can either respond directly or put them in our, the responses in our written comments.

ASSOCIATE MEMBER PFANNENSTIEL: Mr. Long, if you have written material maybe it would be more efficient then if you put them in just in your written comments. Just comment today on things that we could discuss.

MR. LONG: Sure. If you don't mind, I would like to just briefly mention a number of areas across the, across the chapters. I have been asked by my colleagues to make sure that they are brought up here. Just to make sure that they are put into the record and that we have time to

discuss them in the days coming before the final report.

So I'll speak first about the renewable energy issue in Chapter 1. And with regard to transmission, NRDC really commends the Commission and the staff for the significant progress and continued hard work on overcoming transmission issues. The Legislature -- sorry.

As you know the legitimate concerns about siting transmission projects. There's a number of real obstacles with regard to transmission in achieving our renewable energy goals. And we appreciate the Commission's leadership in the RETI process and we look forward to continuing to work with the Commission in that process.

Generally speaking we support the identified recommendations for transmission barriers as noted in Chapter 1. However, while we have made significant strides toward addressing these barriers, a lot of work remains to be done.

We agree that there are opportunities for joint transmission projects, which may occur as a result of planned collaboration efforts currently underway. However, NRDC recommends that

the Commission actively work towards resolving identified issues for joint transmission projects to avoid multiple lines in the same area and direction, which is noted, to create unnecessary environmental burden, impact, controversy and delays.

In addition, mitigating the impacts of large scale renewable projects and new transmission lines in the California desert will be extremely difficult. Therefore we urge the Commission to initiate planning for comprehensive mitigation strategies as early as possible.

We fully support the proposed funding to help local governments develop renewable energy elements for general plans. This effort is an important way to educate the public on the role of new transmission and achieving our aggressive, renewable goals. In addition to the proposed funding NRDC urges the Commission to also offer assistance and expertise in that planning process to produce informed and effective decisions.

Lastly with regard to the transmission effort. As everyone knows there's been a great deal of controversy and continues to be controversy with regard to transmission. And

while we obviously support the effort to pursue further transmission we think that the side-by-side effort to work on continued distribution, it will really aid that effort. To be sure that we are pursuing all possible approaches to renewable energy and that those lines that are built are in fact necessary to meet the renewable energy goals as stated by the Governor and by the Legislature.

Moving on to Chapter 2 with regard to demand forecasting. We appreciate the clear and thorough discussion of demand forecasting challenges in this chapter and commend the Commission and your staff for the active role in bringing together key players and identifying potential solutions and time lines for addressing the complicated issue of embedded energy efficiency in the demand forecast.

We look forward to our continued participation in this effort and we have just a few comments in this regard. We recognize and appreciate the challenge of treating energy efficiency upgrades as 100 percent reliable since some programs are subject to changing customer behavior, as noted by the staff. However, the assumptions that determine estimated energy

savings rely on EM&V studies that are based on actual customer behavior.

And I will just add that any demand forecast -- It is our position that any demand forecast depends on possibly changeable customer behavior. And so energy savings forecasts really should be no different in that regard.

We suggest that the staff make the distinction that while energy efficiency is subject to different variables than power plants, there also exist numerous methods to account for the behavioral change and to further ensure that estimated savings for energy efficiency programs are in fact realized and can be relied upon.

We appreciate the staff description that energy forecasters may need to discount the savings from energy efficiency programs due to a spill-over and double counting. But we request a clarification as to whether and how the forecast discounts savings as part of incorporating energy efficiency in the demand forecast. We believe that further discussion is merited in the final report.

We appreciate the efforts of the staff to identify common assumptions for planners and

policy-makers to use in the short term while the Energy Commission pursues additional actions, as laid out in the IEPR Update to modify the demand forecast during the 2009 IEPR cycle and beyond.

We agree with the staff that instead of altering the definition of uncommitted the Energy Commission should run models with a second scenario to consider and identify the impacts of uncommitted programs.

We also reiterate the importance of understanding the amount of embedded natural gas efficiency in the demand forecast and urge the Commission to include more explicit discussion of the natural gas embedded efficiency issue within the IEPR Update.

Lastly on this point. We support the steps laid out in the 2008 Update for addressing this issue and strongly recommend that CARB also be an active participant throughout this process. We really appreciate the Energy Commission's leadership and we hope that CARB will continue to be actively more and more involved.

With regard to AB 2021. Again we publicly commend the effort of the Commission but also that of the publicly-owned utilities towards

achieving their goals. And encouraging continued collaboration to ensure that the POUs achieve all cost-effective energy efficiency.

We have also noticed a growing and impressive willingness on the part of the staff to collaborate in moving forward on this effort. And we understand that the initial potential studies for the POUs were not necessarily tailored to each utility and therefore may warrant some modest adjustments.

And while we agree with the staff that the POUs need to continue to be proactive in meeting the adopted goals, we also recommend that the staff include in the 2008 Update a specific reference to the fact that energy efficiency is required as a procurement resource. And not only as a procurement resource but as the highest priority procurement resource in the purchase -- along with the purchase and construction of conventional sources of energy.

This requirement is not only in the stated policy of the Energy Commission as noted in the IEPR Update, but it is mandated by these laws and should be reflected in the IEPR. Furthermore, by pursuing energy efficiency as a resource the

POUs will be able to achieve even greater energy efficiency savings that will not only help the state meet the aggressive AB 32 goals, we will save money for customers and reduce utility bills.

As noted by the staff, the public goods charge allocations are insufficient to achieve the savings needed to meet all cost-effective energy efficiency. And we urge the Commission to include recommendations that the Energy Commission work with the POUs to identify procurement resources to supplement the public goods charge funding and provide additional guidance to assure that the POUs identify all sources of funding for their energy efficiency programs in the next SB 1037 report.

We recognize that time constraints led to more generalized inputs for the last energy efficiency potential. Therefore, not addressing the unique characteristics of each POU, as I said before. We therefore support staff's recommendation that they continue working with the POUs to understand the process used by the POUs to estimate their remaining economic potential and to continue to set targets.

NRDC recommends that the Energy

Commission provide additional specific guidance to the POUs to ensure that the next round of potential studies are more rigorous and provide the necessary detailed information that will enable the transparent review by the Energy Commission and the stated parties.

With regard to Chapter 3 I just have one comment. That we are supportive of the staff and Commission decision to use the LTPP process for accounting for an array of various natural gas costs rather than using a social discount rate.

And moving on to Chapter 6. We just would like to have a few comments on this point.

PRESIDING MEMBER BYRON: I noticed you skipped over the nuclear vulnerability assessment. No comments on that?

MR. LONG: No comments on that at this time, Commissioner Byron.

PRESIDING MEMBER BYRON: All right.

MR. LONG: So yeah, just moving on to Chapter 6 if I may. We commend the Commission for the advancements towards meeting the previous energy efficiency recommendations and we agree that the Energy Commission has made substantial progress in providing the POUs with clear

reporting requirements.

However, we reiterate the need to provide additional guidance to the POUs to include detailed information on how they are meeting the law by using energy efficiency as a procurement resource pursuant to AB 2021. As that law states, the POUs are required to report on their investments in energy efficiency.

And while they have made great strides to provide information such as expenditures and savings, it is not clear if these expenditures are primarily public benefits charges funds or procurement funds. Unless we have a clear breakdown of the different sources of investment fundings for energy efficiency programs we will continue to be unclear whether the POUs are meeting the requirements of SB 1037 and 2021 to use energy efficiency as a procurement resource.

With regard to natural gas we appreciate the efforts of the Commission to diversify the natural gas supply sources by pursuing biomass. However, we also believe that there should be an update on the progress toward examining the feasibility of increasing the natural gas production from biogas. Which was identified as a

potential renewable source in the 2007 IEPR report and we would like to see more information on that in this report.

We recommend that the IEPR Update report on the progress towards the recommendation that the Commission and the PUC adopt a loading order for natural gas resources similar to the one used and so well-loved by NRDC in the electric sector.

With regard to transportation. We commend the Energy Commission efforts to identify sustainability goals for alternative fuel production.

However, in addition to addressing the key issue of land use NRDC recommends that the Energy Commission also develop sustainability goals to ensure the alternative fuel production minimizes other unintended consequences, including food price impacts, the effects of increased water and fertilizer use, while also encouraging best practices to ensure that biofuel production is implemented as a sustainable manner -- in as sustainable a manner as possible.

We recommend that the Energy Commission at minimum meet or exceed the land use safeguards that will be required under the federal renewable

fuel standard.

We suggest that the Energy Commission modify the current recommendation to establish a non-petroleum diesel fuel standard that is more consistent with the level of minimum non-petroleum content identified in the low carbon fuel standard expected to be implemented in 2009. And we support the efforts to regularly update the full fuel cycle analysis. And we encourage the staff to coordinate with the EPA to ensure consistency with the federal methodology currently under development under the renewable fuel standard.

With regard to land use. We support the efforts to require local governments to create climate action plans. However, since land use is most often a regional issue, NRDC recommends that rather than addressing individual local land use in its GHG reduction plan the Energy Commission should urge localities to pledge to follow the sustainability community strategy due to be developed under the recently passed SB 375. As you may well be aware, this strategy which establishes regional frameworks to minimize greenhouse gas emissions from land use will currently be optional under the bill.

While we support efforts to increase energy elements in local government plans we understand the capacity constraints of many local governments. And as noted in the transmission section, we recommend that the Energy Commission also offer technical assistance to enable local governments to comply with this requirement.

And my last comment here will be on water energy use. We appreciate the assessment of progress towards reaching the once-through cooling recommendations and urge the Commission to also include a progress on additional water recommendations in previous IEPRs.

In particular we urge the Commission to include progress on the Energy Commission's efforts to fulfill the requirements of AB 662, Ruskin, and AB 1560, Huffman, by initiating a standard-setting proceeding and to define a water energy research development and demonstration strategic plan and road map as noted in the 2007 IEPR.

I appreciate you bearing with me while I got through those comments.

PRESIDING MEMBER BYRON: And I suspect that's not all of them.

MR. LONG: That's all of them for today.

PRESIDING MEMBER BYRON: All right. You know, it's fair to say NRDC provides very thoughtful input. I don't even think we would need any more legislation if we were to make sure we followed all of NRDC's recommendations. There's a lot in there. I picked up on a couple I'd like to ask you about.

MR. LONG: Sure.

PRESIDING MEMBER BYRON: And perhaps my fellow Commissioners would as well.

You made a statement, Mr. Long, about the public goods charge is insufficient to meet the high energy efficiency goals that we have put forward, and I agree. There is an enormous amount of money that is spent on energy efficiency and clearly a big emphasis for NRDC.

I was wondering -- And so I am now jumping a little bit to transmission and your endorsement with regard to transmission. In fact I should point out we are very thankful to have Johanna Wald co-chairing the environmental working group on the RETI process. Her involvement has been extremely helpful. And I think that is the key to the RETI process is the involvement in the

environmental community.

MR. LONG: I'll certainly pass that along to her.

PRESIDING MEMBER BYRON: Please do. So bringing those two together we stuck a recommendation in here about -- I'm sorry, I need to say one more precursor before asking this. You know, this industry spends a paltry amount on research and development. In fact someone told me that the electric power industry is ranked right behind the pet food industry in terms of percentage of sales that we spend on research. And we are not going to get there with this low level of spending.

You are well aware of some recent legislation that did not make it through the Governor's Office to fund a climate research institute at the Public Utilities Commission. And in fact some of those funds were going to be taken out of the Public Interest Energy Research Program here at the Energy Commission. It's like moving the chairs around on the deck of some famous ship.

We should be spending a lot more on research. So we put a recommendation in here that transmission research is really going to be

necessary in a significant way to look at how we are going to address hitting these renewable targets. Are you going to provide us any comments or support with regard to that recommendation?

MR. LONG: At this time I'll refrain from making comments in support of that but I'll certainly take that back to Johanna who has been our lead at NRDC on these issues, as you well know, and see that she -- make sure she addresses that issue in our final written comments.

PRESIDING MEMBER BYRON: We would appreciate it because we can't do all these things unless we have got the necessary research and support, I believe, in order to -- and technology in order to do them. To state it simply, you just can't set the goal and say, get there.

So thanks for your very thoughtful comments. I think NRDC gives us a lot of good stuff. In fact I note you are becoming as big as government. How many people are there now at the NRDC? Can you tell us?

MR. LONG: Over 400 nationally. I hope you don't say that in too many more forums because I am just a one-year fellow here so I'm hoping that I can get another position created for me

next year.

(Laughter)

PRESIDING MEMBER BYRON: Any questions for Mr. Long?

ASSOCIATE MEMBER PFANNENSTIEL: Just one. I was sort of struck by your recommendation that we ask the publicly-owned utilities to divide their funding, their energy efficiency funding between procurement funding and public goods charge funding as the investor-owned utilities do. But I wasn't quite sure why. What is the point of that?

MR. LONG: Because we would like to be very clear that the public utilities are making progress towards making energy efficiency their top priority procurement resource and we would like to see that there are procurement funds going in that direction. We believe that there are sufficient energy efficiency resources available. And that the public goods charge alone won't cover all those resources and we want to make sure that we see --

ASSOCIATE MEMBER PFANNENSTIEL: That there is some amount without knowing how much --

MR. LONG: That we can see some amount

from the procurement resource that it is, in fact, meeting the 2021 goals of being the chief procurement resource.

ASSOCIATE MEMBER PFANNENSTIEL: Thank you.

MR. LONG: Thank you very much. I look forward to the rest of the comments.

PRESIDING MEMBER BYRON: Thank you.

MR. LONG: I think someone left their comments here.

PRESIDING MEMBER BYRON: All right. The next speaker I have to provide public comment is Mr. Don Rodes, SolarAire.

MR. RODES: Commissioner Byron and the other Commissioners, good morning. My name is Don Rodes. I am the founder and chief executive officer of SolarAire. We are a developer of solar thermal air conditioning systems for commercial buildings. SolarAire and its affiliated company, Bergquam Energy Systems, are responsible for four projects demonstrating solar thermal air conditioning here in California. Several of these have been in continuous operation for over 20 years.

My testimony I hope addresses overcoming

some of the barriers to the increased development of renewable energy sources, namely the lack of distribution infrastructure, the variable and intermittent nature of such resources, and the costs of same.

Cooling, heating and hot water account for the majority of energy used in buildings. And while the Commission recognizes that solar water heating can reduce the demand for electricity and natural gas, we believe that it is overlooking the potential for solar thermal to mitigate as well the huge electricity demands for air conditioning. Particularly in the hot afternoons of the summer months in most regions of the state.

Solar thermal cooling uses hot water from approximately 180 to 200 degrees fahrenheit to drive either an absorption or an absorption chiller, which produces chilled water for the air conditioning system.

Solar thermal cooling and heating systems are a distributed energy source. The cost of operation can meet or beat the cost the building owner would pay the utilities. The technology is robust and proven. It is deployable immediately. It is scalable to service most

commercial buildings and thus capable of significantly addressing greenhouse gas emissions.

Solar thermal HVAC has several unique advantages over other solar technologies. The energy output from a solar array can be economically stored as hot water. This allows the system to continue to operate despite intermittent cloud cover.

Secondly, the output of a solar thermal system is elegantly in phase with the demand for cooling. It reaches its peak capacity in mid-afternoon. And that capacity actually increases as the temperature of the hot water in the storage tank increases. In some instances up to 40 percent.

And lastly, because of the storage capability, these chillers can operate up into the early evening, thus truly shaving off the peak electricity load for the building.

Solar thermal air conditioning is not expensive. Our analysis shows that systems providing cooling, heating and hot water for buildings ranging from 1,000 to 50,000 square feet can achieve levelized costs of approximately 17 cents per kilowatt hour for displacing air

conditioning load at prices of 90 cents to around $1 per therm for supplying domestic hot water and heating.

While awareness of the potential for solar thermal heating and cooling in this country is significantly lacking, this is not true in Europe. The European Union is aggressively investigating the viability of solar thermal cooling. There are over 100 installations in place today, even though all but the most southern EU countries can really benefit from this technology.

Unfortunately today, performance data on the systems that we have installed in California, and I am speaking of SolarAire and Bergquam Energy Systems, has not been rigorously collected and therefore some questions remain about the viability of this technology. What types of building end-uses and which climate zones using what specific technologies are the most appropriate.

So in light of these questions, and the fact that newer and smaller chillers are now available making residential application possible, I wish to propose that the Commission fund a small

number of demonstration projects.

Now this could be done under the auspices of the California Energy Industries Association and the Commission as well as the appropriate utilities. It could use local solar thermal contractors and suppliers wherever possible. And we could fully monitor their performance and cost of operation.

The cost of such a program, I believe, given the potential benefits of solar thermal cooling for the state of California, would be inconsequential. Thank you for your time.

PRESIDING MEMBER BYRON: Absolutely. Let me ask. Mr. Gravely, I think you are the right person to ask. Are you aware of this, of this technology?

MR. GRAVELY: Yes sir. I was able to --

PRESIDING MEMBER BYRON: Because it seems like every time you pass me in the hall you bring up some other technology I should be aware of.

(Laughter)

MR. GRAVELY: We actually, as you noticed in the report, we did talk -- And this came from the renewables side, from Gerry's side

also, that we also see an opportunity in the distributed assets. Being able to count these. These currently wouldn't count under the RPS goal and things like that so we do see it -- We do see the opportunity both in the side that we have as well as the renewable side.

We are looking at demonstration projects and doing things like that. So we have seen this opportunity and we are pursuing it in that direction. And the reason it is in the IEPR recommendation is that we do see this as an opportunity that we think is worth pursuing and we think there will be more opportunity.

PRESIDING MEMBER BYRON: Mr. Braun, did you want to add anything else?

MR. BRAUN: I do want to mention that there is a specific recommendation in the report to develop a targeted program for emerging renewable heating and cooling technologies. Assessing how to strengthen the market for commercially mature technologies. So I think we are in agreement. We will be giving considerable thought to this going forward.

I should also point out that we reoriented our renewable energy R&D programs to

try to take what I would call a full menu approach with emphasis on, of course, the technologies that feed into the big grid but also technologies that can be integrated in buildings. And then the technologies that are on an intermediate scale that could be deployed by communities with the support of the public in the community.

So we are trying to take a different approach where we emphasize the kind of issues that you have raised. The integration issues as opposed to just simply trying to improve the core technologies.

PRESIDING MEMBER BYRON: Mr. Rodes, thank you. It is always great to have some technology-based comments at these workshops as well. Thank you for coming.

MR. RODES: Thank you.

PRESIDING MEMBER BYRON: And if you want to go a step further and provide some comments in writing that would be very helpful as well.

MR. RODES: Will do. All right, thanks very much.

PRESIDING MEMBER BYRON: Thank you. I have one more card for individuals that are present. Fong Wan from PG&E requested to speak

towards the end of the public comments. Mr. Wan, I have some additional phone ones but you are welcome to go now or later, your choice. You are going now.

MR. WAN: I would appreciate that.

PRESIDING MEMBER BYRON: And we are pleased that you are here today. It is nice to have a senior vice president from PG&E present and listening to all these comments. We appreciate it very much.

MR. WAN: Thank you very much for coming here today too, for being able to come here. The first topic I would like to cover is renewable procurement. We do see some of the same significant barriers that the CEC sees, including transmission, integration of renewables, contract delays, permitting and environmental concerns. And we would very much like to work with the rest of the stakeholders, including this Commission on the RETI process, the integration studies, working with the ISO to address the queues, exploring energy storage technologies. One of my personal interests is compressed air storage. So we are very happy to work with all of these -- on all these fronts.

There is one mention about the need for the PUC to take control of the renewable energy procurement. We believe the PUC has an active and effective oversight for the process and the rules for the PRG independent evaluators are well laid out, as well as the selection of the winning bidders. We don't believe the state should take over the procurement process unless we want something similar to the DWR experience that we have seen in the past.

As we mentioned in the past, PG&E has been very active in the contracting process. We signed over 40 contracts, over 3500 megawatts. In fact, we have moved for a new approach in the 2009 RFO, renewable RFO process.

We would like to pilot a process in which any contracts, any of the sellers, if they are willing not to change any of the language that is pre-approved by the PUC, and as long as the pricing is below MPR or at MPR, these contracts will be pre-approved. That is our effort to expedite, to expedite the process. And there is no limitation in terms of the number of megawatts. We do ask the pilot project to be limited at about 800 gigawatt hours, which is about one percent of

our energy. So it is a sizable program.

PRESIDING MEMBER BYRON: And you are speaking softly. Was it 800 gigawatt hours? Was that what you said?

MR. WAN: Yes it is. Sorry about that. So we hope that this program could bring cost-effective, renewable projects as well as viable projects into the process. That is our objective on renewable procurement.

We also saw in Chapter 3 that there's a desire not only for IOU renewable procurement to be put under the, to be moved over to the PUC but the overall procurement process. It is not very clear to us how that, how that would be done and we would like to have a little more understanding. Our thought is that the PUC's oversight is effective and it is well established.

In terms of the small renewable projects I would like to touch on a few things. We do see distributed renewable resources as part of the solution. We are not sure we see the impacts or the benefits of integration of small renewables. Because after all small renewables are not dispatchable and it depends on the situation. It may or may not require upgrades to the

distribution system.

There were a few areas I was not clear on. Commissioner Pfannenstiel had mentioned that the feed-in tariff would not require any contracts. I just wanted to understand a little more about if that really means the utilities would not be required to sign contracts.

And the second topic I heard was the cost-based approach, depending on technology. We would like to be cautious on that approach. And that's because we don't believe we should be achieving renewables at any cost. As well as, as we talked about in the past, our goal is to reduce GHG. And from a societal perspective a cost-based feed-in tariff may not achieve the best approach in reducing GHG. We believe AB 32 does have and encourages a cost-effectiveness test. So we would like to make sure that a cost-based approach is consistent with that concept.

The last part I wanted to mention is energy efficiency forecasting and CEC projections. This is a very important area for the utilities. We encourage the CEC to continue to work on that; we are committed to help. And it is critical in our long-term resource planning process.

One other additional topic. There were some questions directed at Edison earlier regarding gas costs. I just wanted to make sure that everyone understands, PG&E is extremely concerned with the overall affordability of energy for our customers. That includes the electricity and natural gas costs.

I was the policy witness in front of the PUC on gas hedging and we would like to see more moderation and more hedging of gas prices. We believe we have entered into an era where our customers truly have some concerns in terms of whether they can afford energy costs. So our concern is not only about renewable costs but it's also gas costs. I just wanted to make sure we passed that along.

That is all I have to cover.

PRESIDING MEMBER BYRON: I wrote as quickly as I could, Fong, so give me just a moment here.

MR. WAN: I'd be willing to reiterate some of the points if that's beneficial.

(Laughter)

PRESIDING MEMBER BYRON: I think there might be a little bit of misunderstanding with

regard to the recommendation on procurement that I would like to try and clarify. I don't have it in front of me and I am not going to take the time to go look for it.

But we are not looking for the state to take over procurement, per se. I think the PUC has modified the procurement process probably six or eight times over the last eight years through various changes. And I forget the name of their process with rulemakings. And the tweaks, if you will allow me that, have had some positive effect. They have all been an effort to correct what was intended originally as a short-term process, these procurement review groups. And I'll use strong words when I say you can't put lipstick on a pig.

(Laughter)

PRESIDING MEMBER BYRON: The problem is that needs to be corrected. So what we are attempting to do here -- And this is not the first time, as you know, that a recommendation like this has shown up in the IEPR. We are trying to fix that procurement process. So it is not, per se, that the government needs to take over. I think the PUC needs to exercise its full responsibility.

And what we are really concerned about

is going forward. Some of the investor-owned utilities' stated policy to get back into the generation business. And the way that that is being done, inside and outside this procurement process, raises serious concerns about the competitiveness of the market, the transparency of it.

I think PG&E's recent application before the PUC outside the procurement process to develop a large power plant really chills the forward market for procurement. So I know you and I have discussed these things. I look forward to more discussions.

But what we are trying to do is essentially get the PUC to fully discharge their responsibility. That doesn't mean that the IOUs don't have a great deal of input to the procurement process but the selection needs to be done in a more transparent way that does not involve the biggest power marketer in the state, and that's now become the investor-owned utilities again. They are making their own procurement decisions.

And sometimes, as the example I pointed out, going around that procurement process. So I

don't think the procurement process is working very well right now and we are interested in working with the Public Utilities Commission, who I think is intent upon getting this right as well, to try and fix that.

MR. WAN: Well, I understand that. I also want to say that we respect the views of this Commission and we understand where you are coming from. But we also respectfully disagree with that we have circumvented the process. And I point to the proposed decision issued by the CEC -- the CPUC, excuse me. And a major concern that the PUC had was that there was not enough of a record to establish, there was not enough time for an RFO.

If we go back to the December 2007 CPUC's decision and we can sort through that at some time. I think there was provisions in there, say for failed projects, if the resources are needed. The utilities do have the opportunity to submit such a project as the Tesla project. And we believe that the Tesla project was cost competitive in terms of all the alternatives. And I have said in front of the PUC that we would be willing to submit all the information from the current RFO to demonstrate that and we will be

submitting that in the process.

With all that being said, we also respect the decision by the PUC and we have canceled the equipment order on Tesla. At this point in time we are not moving forward with Tesla. So that's where we rest.

PRESIDING MEMBER BYRON: And of course this Commission licensed or permitted the Tesla power plant a number of years ago. We tend to like to see the power plants that we permit get built. And so we are certainly, we are certainly not against the additional construction of generation assets. Despite the fact that this Commission also ruled against Eastshore yesterday. But we are concerned about the way these projects are procured.

And as we have discussed, there's other issues that are not being addressed in the procurement process such as the environmental consideration. Some of these projects -- I should refrain from saying again, may not be -- I won't say it again. But may not be the best choices. And we are seeing significant contract failures on some of the procurement for renewables as well. We are quite concerned about this and I suspect

you are as well.

MR. WAN: Absolutely.

PRESIDING MEMBER BYRON: And I also suspect that our intention is absolutely the same. We are trying to get this procurement process right, we are trying to get it transparent for customers so they believe that you are indeed acting in their best interest and not shareholder interest, and we are trying to get it right so that these projects get built rather than get permitted and not built.

MR. WAN: Well I would like to point out one thing, Commissioner Byron. That the customer advocacy groups are not the ones asking for more transparency. They believe there is an adequate amount of legitimacy in the process.

PRESIDING MEMBER BYRON: I'll accept that there is one customer advocacy group that is not advocating.

MR. WAN: That's correct. As well as certain staff of the Commission, as you know. Energy Division as well as the DRA. I don't see them saying there needs to be transparency in the process. That the best and the most cost-effective projects are not being selected. So I

do see the people who are representing the customers' best interests not voicing these opinions. What I do hear is, in general, the generators saying that and it is a very interesting situation. The winners are not saying that, it tends to be the losers in the process who are saying that. So that's what I typically see.

PRESIDING MEMBER BYRON: Well, I think we probably should bring this conversation to a close.

MR. WAN: Okay, thank you.

PRESIDING MEMBER BYRON: Because it could go on forever. But we did hold a good workshop on this, Mr. Wan. And your company was represented here as well as others and I think we learned a great deal more about the procurement process.

And of course having read the recent RFO in its entirety, there are provisions in there that even prevent winners, as we know,, from discussing, from discussing their involvement in the procurement process. And it prevents losers from discussing it as well because they all have to sign confidentiality agreements. In fact I remember reading a letter that you wrote to one of

the winners of your procurement process just a couple of weeks ago that told him to keep his mouth shut.

MR. WAN: Well, I did send a letter. It was a please shut up-type of letter, I agree with that. As to whether they were a winner or loser, I think this is a really important time in our RFO process. We have not short-listed any parties. In fact I received numerous calls due to the Mirant CEO's disclosure at the Merrill Lynch conference in New York that they thought they had the inside track to win.

The other sellers were all saying to us, if you have already predetermined a winner please don't let us waste any money, don't let us waste any of our time, because we wouldn't like to pursue the project. So they said, you need to make a public statement that this is not true. They are not predetermined a winner. They have no justification in saying so. In fact, they have violated the confidentiality agreement.

Yes, the letter was a little harsh, I agree with that. We really wanted everyone not to jump the gun and try to fend off others while others are investing money. Developing projects,

whether they are renewables or conventional, as you know very well, cost a lot of money. And we don't want to have a self-fulfilling prophecy in which Mirant could become the winner.

With all that being said, Mirant's project is a good project, as with many of them. So we have not at all put them in a box. They will be considered at this point as long as they don't discourage the other bidders. That's where we are really coming from.

PRESIDING MEMBER BYRON: Mr. Wan, thank you very much. I refer to a report that came out in July that was, I believe, funded by the Department of Energy that the National Association of Regulatory Commissioners put out on procurement.

It looked at how procurement is done throughout the United States by various utilities and public utilities commissions. I found it to be very enlightening. There are some very good principles in there. This Commission is not making this stuff up. We plan to work with the Public Utilities Commission and see if we can apply some of those key principles to correcting the procurement process.

The example that you just brought up I think helps prove that we are still not quite there yet. As you know there were similar objections by some of these same folks around the Tesla project and they objected strongly at the PUC.

I hope you will accept that we are just trying to, we are just trying to get it right and make sure that we can fulfill all these other policy objectives that we are trying to accomplish around resource adequacy, around RPS, around distributed generation. And I think it all comes back to this procurement issue.

MR. WAN: Commissioner Byron, I truly believe that we share the same interests, which is to really serve the California customers the best. That's in terms of the most reliable energy, the most cost-effective energy, as well as environmentally responsible energy. And I really do believe that.

PRESIDING MEMBER BYRON: Listen, I thank you very much for being here. Madame Chairman.

ASSOCIATE MEMBER PFANNENSTIEL: Thanks. Something your dialogue just triggered. It really is the question of, and I actually asked this of

Mr. Silsbee, of corporate policy on electricity procurement as opposed to self-owned generation. Is there a PG&E, either utility or corporate policy on what percent of generation the utility should own?

MR. WAN: I've had this question before.

ASSOCIATE MEMBER PFANNENSTIEL: I didn't mean it to be a trick question. If no, there is no policy, is fine.

MR. WAN: I think there's a strategy, I am not sure that there's a policy. I'm not trying to be cute with the answer.

ASSOCIATE MEMBER PFANNENSTIEL: Okay, go ahead.

PRESIDING MEMBER BYRON: Well, policy he could answer, strategy he might not be free to answer.

MR. WAN: No, no, no, no. I'm saying in terms of the strategy, we really believe what we have learned from the energy prices. That some portion of our generation should be coming from utility-owned generation. And I think we had this discussion as to what should that target be. I believe our strategy is in new generation we would like to have perhaps up to half of the generation.

But that has to meet the cost-effectiveness test in the best interest of the customers.

ASSOCIATE MEMBER PFANNENSTIEL: So help me understand then. Do you have in mind that about half would be utility-owned?

MR. WAN: New generation.

ASSOCIATE MEMBER PFANNENSTIEL: Of new generation, sorry. New, procured generation would need to be your own or independent. So you issue an RFO. Where does the utility generation potential fit in each RFO?

MR. WAN: The PUC was very clear on this issue, which was they should all be put together. They should all be evaluated together with the same criteria, same scoring system, and may the best winner sort out. So the PUC did not adopt our recommendation to have two separate buckets. That was our recommendation.

ASSOCIATE MEMBER PFANNENSTIEL: So there is presumably, there is oversight to assure that nobody puts a thumb on the scale on either side on any project, whether it is utility-owned or anybody else. But do you then see where we as other public policy concerned people, because we don't have, because that information is all held

confidential, and whether it is renewable procurement or non-renewable procurement, we have no way of evaluating anything other than the results.

MR. WAN: I do see the concern since you don't have the information. I just want to be clear on the confidentiality provision. It is my understanding, and I may not have 100 percent accuracy on this recollection, that the PUC's rules on confidentiality expire at some point in time. So all of our signed contracts, all of the information will eventually be made public. My understanding is that it is three years from commercial operation date. I understand that is not in real-time.

ASSOCIATE MEMBER PFANNENSTIEL: Right.

MR. WAN: But there is judgment day when the information does get disclosed. And the reason we ask for a time lag in the disclosure is that we don't want other market participants to be able to see exactly where they should be pricing the renewables, where they are pricing the conventional, what's our buying practice. We believe that X amount of period of time, if that goes by, there is no longer a concern for the

real-time decision-making. So I think I understand your concern for the real-time aspect.

ASSOCIATE MEMBER PFANNENSTIEL: We have had the discussion before. Thank you very much.

PRESIDING MEMBER BYRON: Mr. Wan, I was just -- One other thing triggered in my mind. It is not necessarily related to the IEPR but this came up in committee meetings the last couple of days. As part of our '09 IEPR we will be looking at 33 percent renewable integration. Or instead of focusing on the number, as I like to put it, moving towards a renewable future.

We are going to need a lot of information in order to do this analysis well. We will be coming at you and other investor-owned and publicly-owned utilities in the next couple of weeks, I think in the next month, with forms and instructions for the information that we will need, that we will be required to have in order to do this kind of analysis. We are spending a lot of time at the Commission here working on that and trying to minimize the impact for all the information.

There will be concerns about confidentiality. We'd like to make sure we

address those concerns up front. And we will be doing some meetings with POUs and IOUs in order to work through that in hopes that we can avoid the prolonged litigation that we went through, I understand, in previous IEPR cycles to request the information. So I am pleading with you to help us keep this out of that kind of confrontation.

MR. WAN: Sure.

PRESIDING MEMBER BYRON: This Commission does respect its confidentiality agreements. And we would like to work out ways that we can roll information up or aggregate it, such that we have the information we need. We can record it and we can get the kind of analysis done that we need to demonstrate and show that we can move towards higher renewable integration.

Before you respond I would just like to ask if Mr. Jaske or Ms. Bender or anyone would like to respond. Did I say that halfway right? Mr. Jaske may correct me here.

DR. JASKE: No, I think you put forward the goal quite accurately.

PRESIDING MEMBER BYRON: That's it?

(Laughter)

ASSOCIATE MEMBER PFANNENSTIEL: Take it,

Jeff.

PRESIDING MEMBER BYRON: Okay, I take that, I take that. Mr. Wan.

MR. WAN: We'll be happy to work with you, Commissioner Byron, and we have full faith in this Commission that it would keep the information confidential. We'd ask that any commercially sensitive information not be shared broadly with the public.

PRESIDING MEMBER BYRON: Okay. Thank you very much.

MR. WAN: Thank you.

PRESIDING MEMBER BYRON: Thank you for coming and listening to all the input.

MR. WAN: Thank you.

PRESIDING MEMBER BYRON: Unless there are any other public comments here in the audience, and there certainly can be. I have three commentors that wish to speak that are on the phone. And in the order that I received them the first one is Clinton Cole. And I believe the organization is called the CURRENT Group.

MR. COLE: Yes, this is Clinton Cole from CURRENT Group. I would just like to take a minute to give a quick comment regarding Smart

Grid. And I will try to answer any questions you have but there's a good chance that I will have to take them back to people who are able to answer them more effectively than I can.

But I just wanted to say that I work for CURRENT Group, which provides Smart Grid equipment and services. We currently support some Smart Grid deployments in Dallas, Texas and in Boulder, Colorado. We participated in CEC proceedings and CPUC energy efficiency proceedings.

CURRENT recommends that the modernization of California's distribution grid with Smart Grid technologies be included in the 2008 IEPR Update. Smart Grid significantly increases reliability and efficiency throughout the distribution grid through various means, including real-time system optimization and reduction of grid line losses, all of which can result in a reduction in electrical costs and a reduction in CO2 emissions.

Further, Smart Grid supports the full integration of renewable energy and distributed energy sources among millions of user locations. As such, Smart Grid implementation is an essential strategy in meeting California's near-term and

long-term renewable energy and greenhouse gas emissions reduction goals and we think it should be characterized as such within the 2008 IEPR Update. That's about all I have. If you have any questions I can try to answer them.

PRESIDING MEMBER BYRON: Are there any questions from -- Mr. Gravely.

MR. GRAVELY: Yes, Mike Gravely from the R&D division of the CEC.

We actually addressed in one of our workshops the Smart Grid technologies and have addressed some of those in this effort. I think you will find we have made a conscious effort. Because of the complexity and the integration that we would prefer to address this as part of the 2009 IEPR and we envision having several staff hearings and potentially other hearings and quite a bit of effort.

So we do agree that this is one of the areas we want to pursue. We think -- We have some addressed in the 2008 IEPR and we definitely expect to see technical workshops as part of the 2009 IEPR. And I think from where we are with 2008, we got in as much as we could. We think information now would not be fully vetted so we'd

like to, you know, take the time to discuss this in a public forum. We envision Smart Grid being one of the topics we are proposing for 2009.

MR. COLE: Okay. We appreciate you including it in the -- I just got to look at the Draft 2008 IEPR Update and we appreciate the mention of Smart Grid in there. And we will definitely be looking forward to participating in those workshops and getting it into the 2009 IEPR.

PRESIDING MEMBER BYRON: Thanks a lot. Mr. Cole, thank you for being on for your comments.

MR. COLE: Thank you.

PRESIDING MEMBER BYRON: I am going to move on. Next on the phone I have Tam Hunter.

MS. PARROW: Actually he just disconnected.

PRESIDING MEMBER BYRON: Ms. Turnbull, Jane Turnbull from the League of Women Voters.

MS. TURNBULL: Commissioner Byron, I am here but I have no comments this morning.

PRESIDING MEMBER BYRON: I am extremely disappointed.

(Laughter)

MS. TURNBULL: I am too but we plan to

submit some written comments before this is over.

PRESIDING MEMBER BYRON: Ms. Turnbull, we always value your input and I thank you for being on the phone today.

ASSOCIATE MEMBER PFANNENSTIEL: Thanks for listening, Jane.

PRESIDING MEMBER BYRON: I have a card from Sanford Miller representing himself.

MR. MILLER: Good morning, Commissioners. My name is Sanford Miller. I am representing myself. And there were a number of other people who are signatories to this letter that I gave each of you a copy on September 15. And the topic is peak oil.

Approximately a little over 50 years ago an oil geologist by the name of Hubbert, King Hubbert, basically made a prediction that the United States was going to peak in its oil production in the year 1970. He made that prediction in 1950 -- '56, I'm sorry. His prediction actually was correct. In 1970 the world peaked -- I'm sorry, the US peaked in production.

He used basically a fairly logical equation. Basically which took estimated oil

discoveries. And from that he calculated production from that. And he was able to get a peak output.

Now since then that same theory has been applied for world oil production by Mr. Hubbert and a number of other researchers. A lot of them have come up with the conclusion that the world is near or closely to its world peak output. And it is based on the same basic calculations.

The reason that myself and these other people on the signatories to this letter to you believe this is important is there are few alternatives to oil in the world here. The world oil production has been bumping along at 85 million barrels a day since about 2005. It hasn't really increased that much. We have China and India which have been expanding their demand at a very fast rate.

So we feel this is important for the IEPR and for -- not only for the 2008 IEPR to recognize that this may be an issue that needs to be looked at more closely. And certainly with the 2009 IEPR that it needs to be looked at.

Just one last thing. In 2006 the General Accounting Office did a report on peak oil

at the request of one of the committees in Congress and they came up with the conclusion that peak oil was a very real possibility and that the United States was totally unprepared for the possibility that oil would be peaking at some time in the near future. And they didn't offer an estimate of whether or not that peak would be in 2006 or ten or 15 years later on.

The federal government has certainly recognized that. At least the GAO has. And so we believe that this is an important topic that needs to be addressed sometime soon by the Energy Commission in its IEPR.

PRESIDING MEMBER BYRON: Mr. Miller, thank you. I did, of course, receive the letter and I have actually discussed it at some length with Commissioner Boyd, who will be my Associate Member on the '09 IEPR, and as you know chairs the Transportation Fuels Committee here and has for many years.

I am very interested in this subject. I have read a number of books on it myself. And in fact during the peak oil conference that took place here in Sacramento, I believe it was what, three weeks ago?

MR. MILLER: Right.

PRESIDING MEMBER BYRON: I did meet with some folks that were here, Richard Heinberg, I believe, and some others. And they left me more books to read. There are some connotations associated with the notion of peak oil that, let's say, are problematic to some extent.

This Commission, my assessment of what this Commission has done over previous years with regard to positioning itself to work on alternative transportation fuels and really promote the need to wean ourselves from the 96 percent dependence upon a single transportation fuel positions us really well. The low carbon fuel standard. There's other things that this state is doing in the absence of federal direction, I think, that is very good.

Nevertheless I am very interested in putting the context of all of that -- I'm sorry, putting all of that more in the context of the geopolitical implications of our dependence upon oil. So we will be addressing it to some extent in the IEPR. Again, because we are only looking at it from a state perspective there is little that we can do at those national and worldwide

levels that really this has significant consequences for.

So I appreciate your letter. Is there something else you wanted to add?

MR. MILLER: No, that's it. Thank you for considering it.

PRESIDING MEMBER BYRON: Absolutely. Thank you. I do not have any more blue cards. But I do always ask at the end if there is anyone else that feels that they would like to speak. Representing an organization or themselves.

My panel, who has been very patient sitting here so that we could answer any technical questions that came up. Is there anything else we need to discuss?

I think Chairman Pfannenstiel has some closing comments and this would be the time.

ASSOCIATE MEMBER PFANNENSTIEL: Thank you. First of all, I want to thank everybody who was here today. As always it is both helpful and encouraging to get people's thoughts and observations on the work that we have done.

This draft report has a lot of very important invocations in it, not the least of which is the demand forecast. The demand forecast

in California, the Energy Commission's demand forecast is used for a number of purposes. So we need to make sure that it is right and that it is something that everybody buys into. And having not heard otherwise today I am assuming everybody here at least buys into the demand forecast as we put it forward. And if you don't make sure you let us know that. Because otherwise you are going to be living with it.

I think other than that my other observation is who wasn't here today. I am disappointed we did not hear from the Public Utilities Commission. I am disappointed we didn't hear from any of the publicly-owned utilities. We consider ourselves partners with both of them as groups in our endeavor and I think our work is made much better by their participation.

And I understand that there are opportunities to provide written comment and we appreciate those comments. But the ability to interact here is also very important to us. So with that, thank you again for being here.

PRESIDING MEMBER BYRON: Thank you, those are excellent observations. I certainly benefit by having the Chairman's experience on the

2008 IEPR Committee. Unfortunately I will be losing that at the end of the year.

I believe, Ms. Korosec, we have a couple of dates that we should share with participants. That would be when we would like to ask that we receive any written comments and the other one is when is the final workshop date for the IEPR.

MS. KOROSEC: The written comments are due on October 16 and the Energy Commission's Business Meeting where we will consider adopting the report will be on November 19. We will be releasing the report on November 3 in preparation for that adoption.

PRESIDING MEMBER BYRON: And I love asking you this in public. Are we on schedule.

MS. KOROSEC: Absolutely.

PRESIDING MEMBER BYRON: Well, thank you all very much for coming today. The input is extremely valuable. We are adjourned.

(Whereupon, at 11:22 a.m., the Committee Hearing was adjourned.)

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CERTIFICATE OF REPORTER

I, RAMONA COTA, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Committee Hearing; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said workshop, nor in any way interested in outcome of said workshop.

IN WITNESS WHEREOF, I have hereunto set my hand this 15th day of October, 2008.